Recovery was full, or almost so, in 26 of 39 episodes (67%), moderate in 6, and slight or nil in 2 patients followed up for 10 and 12 years respectively. Four patients died within two weeks of a single embolism. One patient who had made a complete recovery from two previous embolic episodes occurring within a short time died nearly two years later, within a month of her third embolism, and had also malignant melanomatosis. Four other cases followed to their death survived nearly four years, two and a half years, eight months, and three months respectively after their embolus. Clinical recovery commonly began immediately after the embolism, or could be delayed for as long as three weeks. On the average improvement began by the end of the first week.

Maximum recovery was achieved by some patients within hours or days, but progressive improvement was observed to occur in individual cases for a year or more. In the average case maximum recovery was reached after a period of four months. Although no cases of associated epilepsy such as those described by Baker and Finnegan (1957) occurred in this series, they might occur if observation were continued over a longer period.

Summary

Cerebral embolism occurred in 34 out of 172 patients (20%) with rheumatic heart disease.

Thirty-three cases are analysed, with the following results: (1) less than one-fifth died within three months; (2) two-thirds of the patients made a virtually full clinical recovery; (3) the average time to the beginning of recovery was one week, and to maximum recovery four months.

The hopeful outlook for patients with this complication of rheumatic heart disease as regards neurological recovery is stressed.

We thank Sir Clement Price Thomas and Dr. C. J. Gavey for their encouragement and criticism of this investigation, and the members of the staff of Westminster Hospital whose cases we have studied.

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Medical Memorandum

Acute Haemolysis Following P.A.S.

A woman aged 24 was admitted to the National Iranian Oil Company Hospital, Abadan, on October 6, 1957. For the previous five months she had been an in-patient in an isolation hospital on account of sputum-positive bilateral pulmonary tuberculosis. There was infiltration in the right upper zone and the left upper and middle zones. On the left side there was also marked fibrosis, and several large cavities could be seen. During the five months of treatment the sputum had remained positive, acid-fast bacilli being found on August 11 and October 3. The haemoglobin on August 11 was 14.6 g./100 ml. (95%).

Treatment had consisted of streptomycin and isoniazid only, but on the morning of October 4 she had been given 6 g. of P.A.S. in solution by mouth. An hour or two later she felt weak, experienced epigastric pain, and vomited. She had a sense of suffocation and was restless. No further P.A.S. was given. Her condition remained about the same for the next 24 hours, and on the morning of October 6 she again vomited and noticed that her urine was reddish in colour.

On admission to the general hospital she was restless, was sweating profusely, and was so weak that she was unable to sit up in bed. Her temperature was 99.6° F. (37.5° C.), pulse 100 a minute and weak, and B.P. 70/0. She was extremely pale and there was marked icterus of the skin and conjunctivae. The liver and spleen were not palpable, but the uterus was enlarged to the size of a 20-weeks pregnancy. The urine was reddish in colour and contained a large amount of albumin, many casts, and a few pus cells and red cells. The test for occult blood was strongly positive, but no bile could be detected. The haemoglobin was 3.7 g./100 ml. (24%), colour index 0.8, and W.B.C. 22,000/c.mm.; the bleeding, clotting, and prothrombin times were normal. There were 6 normoblasts per 100 leucocytes and the blood group was O.

She was immediately transfused with 2 pints (1,140 ml.) of group O blood. The next day the urine contained a large quantity of albumin, red cells, and pus cells, and on October 8 the haemoglobin was 5.3 g./100 ml. (34%), while the urine was free of albumin. The jaundice faded rapidly, and on October 10, four days after admission, the serum bilirubin was 0.3 mg./100 ml. On October 12 the haemoglobin was 6.3 g./100 ml. (40%) and reticulocytes 4%.

"Imferon," 100 mg. by intramuscular injection daily, was started on October 14, and during the next five weeks the haemoglobin rose to 11 g./100 ml. (70%), her general condition improved greatly, she gained 6 lb. (2.7 kg.) in weight, and she felt foetal movements for the first time. From admission until this time no chemotherapy had been given at all.

In view of the fact that the sputum had remained positive for acid-fast bacilli during the whole of the treatment with streptomycin and isoniazid, it was thought desirable to give her P.A.S., and it was decided to attempt to desensitize her. This was started on November 16 with 1/100 g. by mouth. Thereafter the daily single dose was doubled and the haemoglobin estimation carried out each day. After eight days the dose was 1 g., and during the following six days this was raised to 3 g. six-hourly, during which time the haemoglobin rose to 12 g./100 ml. (76%). At the beginning of the course of P.A.S. the sputum was still positive for acid-fast bacilli.

COMMENT

It would appear that an acute haemolysis began an hour or two after a single dose of 6 g. of P.A.S. given orally for the first time. This was so severe that it reduced the haemoglobin to 3.7 g./100 ml. (24%) during the next 48 hours. The fact that the serum bilirubin was normal four days later suggests that the haemolysis stopped as abruptly as it had begun. Immediate treatment with 2 pints (1,140 ml.) of blood followed by imferon, 100 mg. daily, raised the haemoglobin to 12 g./100 ml. (76%) over the next six weeks, during which time there was no evidence of further haemolysis. By starting with a very small dose of P.A.S. it was possible to raise this to 12 g. a day without any ill effects.

It remains to be seen whether P.A.S. will be any more effective than streptomycin and isoniazid in rendering the sputum negative for acid-fast bacilli. It is interesting that the foetus survived the period of extremely low haemoglobin level.

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At the leprosy research centre attached to the Vellore Christian Medical College and Hospital in South India, a team of workers is engaged in the rehabilitation of those cured of leprosy. Their most striking success has been in the reconstructive surgery of claw hands. Mr. PAUL BRAND, F.R.C.S., director of orthopaedics to the Mission to Lepers, described this work at a recent meeting in London of the Friends of Vellore.